Emerging Pains: Detecting Slipped Capital Femoral Epiphysis (SCFE) during Adolescent Growth Spurts

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INTRODUCTION:

Slipped capital femoral epiphysis (SCFE) is a common disorder in growing children characterized by the slipping of the proximal femoral metaphysis over the epiphysis. SCFE needs prompt diagnosis and treatment to prevent onset of debilitating complications. SCFE can be caused by metabolic, endocrine and mechanical factor. Treatment is aimed to prevent further slip via internal fixation.

REPORT:

A 12-year-old boy presented with rare atraumatic left groin pain of one month, accompanied by activity-induced pain and recent rapid growth. Early signs of puberty including hoarseness of voice and facial hair were present. The initial vague anterolateral hip joint tenderness seemed to favor an inguinal insufficiency. Initial pelvis x-ray showed very subtle changes which warranted for MRI of the left hip. He was referred for surgical evaluation and groin ultrasonography. He returned a month later, complaining of persistent and worsening pain after a bout of vigorous physical training. This time he exhibited a Trendelenburg gait with limited hip internal rotation and flexion, and positive Drehmann sign. Plain radiograph of the left hip showed asymmetry in Klein's line trajectory. An MRI of the hip joint further demonstrated a joint effusion, anteriorly positioned metaphysis in relation to femoral physis, physeal widening with inter-physeal oedema, consistent with acute-on-chronic slipped capital femoral epiphysis (SCFE). He successfully underwent percutaneous in-situ fixation.

Figure 1 shows abnormal Kleins line over the left hip (LEFT) and Southwick angle of 15 degrees (RIGHT).

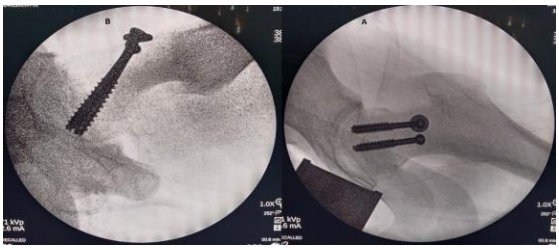

Figure 2 shows reduction of SCFE post screw fixation with Kleins line restored.

Post-operative function was good without any notable complications. At present, he is three months on follow-up and is being worked up for potential endocrinopathy stemming from his precocious puberty.

CONCLUSION:

SCFE should be considered in adolescents presenting with hip pain especially during growth spurts, as delayed diagnosis can lead to complications such as avascular necrosis and long-term disability. Integrating SCFE diagnosis within clinical assessment is crucial, as SCFE can mimic musculoskeletal-related conditions such as adductor strain, rectus femoris avulsion and transient synovitis

REFERENCES:

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